

REMARKS

Claims 1-6 are pending in this application. By this Amendment, claims 1 and 5 are amended. No new matter is added.

I. Specification

Although not objected to, the Abstract is amended to reduce the number of words to 150 or less.

II. Claim Rejections Under 35 U.S.C. §102

Claims 1, 2 and 5 are rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent 5,465,121 to Blalock et al. (hereinafter "Blalock"). The rejection is respectfully traversed.

Applicant asserts that Blalock does not disclose each and every feature recited in the rejected claims, as amended. For example, Blalock does not disclose a projector that is capable of correcting an image distortion due to off-axis projection of an image in a horizontal direction and in a vertical direction onto a screen, the projector comprising *inter alia* ... a two-dimensional input unit that outputs a two-dimensional operation signal, which is mapped to the horizontal correction parameter and to the vertical correction parameter, in response to a user's operation, and ... wherein the values of the horizontal correction parameter and the vertical correction parameter change simultaneously in response to the user's specific operation of the two-dimensional input unit.

Blalock discloses a method and system for precompensating data processing system generated text, graphics or multi-media presentations to compensate for distortion resulting from off-axis projection (col. 1, lines 13-16). However, Blalock only shows that which is known in the art and including the problem that is being resolved in the application, i.e., one-dimensional correction of image distortion which results in iteratively carrying out correction

in each of the vertical direction and correction in the horizontal direction (see paragraphs [0003] and [0009]; Fig. 9 of the application).

For example, in Blalock, if a user has requested adjustment of the image source, the process may display a test pattern to assist the user in determining how much precompensation is required to compensate the image source for the keystone shaped distortion (col. 5, lines 22-25). The process permits a user to input parameters that specify the amount of precompensation to be applied to the displayed test pattern. The process provides a way for a user to input adjustment parameters through the use of arrow keys on a keyboard, which may then be interpreted as a request to make the top portion of a displayed image wider or narrower. The process may interpret the typing of an arrow key as a user request to precompensate the image source by a preselected number of degrees (col. 5, lines 33-47). As a result of the adjustment the left and right sides of the projected image will be rotated toward the center of the image, or away from the center of the image, about a point located at the lower left corner of the image and the lower right corner of the image, respectively, depending upon the direction of adjustment specified by the user (col. 5, lines 60-66).

Thus, the image distortion correction process of Blalock only allows image distortion correction to occur in the vertical direction, i.e., moving the left and right sides of the projected image inward or outward, to or from, the center. Such correction varies only the value of the vertical correction parameter that corresponds to the image distortion in the vertical direction through a user operation. Thus, Blalock does not disclose the ability to simultaneously change values of the horizontal correction parameter and the vertical correction parameter in response to a user's specific operation of a two-dimensional input unit. Accordingly, Applicant respectfully requests the rejection of claims 1, 2 and 5 under 35 U.S.C. §102(d) be withdrawn.

III. Claim Rejections Under 35 U.S.C. §103

Claims 3, 4 and 6 are rejected under 35 U.S.C. §103(a) as unpatentable over Blalock.

The rejection is respectfully traversed.

Applicant asserts that claim 3 is allowable for its dependency on its base claim for the reasons discussed above, as well as for the additional features recited therein. For example, Blalock does not disclose or suggest a projector comprising a distortion correction window generation module that simultaneously displays an indicator representing a quantity of adjustment of the image distortion in the horizontal direction and an indicator representing a quantity of adjustment of the image distortion in the vertical direction, which depend on the horizontal correction parameter and the vertical correction parameter set in response to the two-dimensional operation signal.

Applicant asserts that Blalock does not disclose or suggest a projector that is capable of correcting an image distortion due to off-axis projection of an image in a horizontal direction and in a vertical direction onto a screen, comprising *inter alia* a distortion correction window generation module that simultaneously displays an indicator representing a quantity of correction of an image distortion in the horizontal direction and an indicator representing a quantity of correction of an image distortion in the vertical direction, when an image distortion correction process is selected on the displayed menu option window and starts, as recited in claim 4, or a method of correcting an image distortion of a projector ... comprising ... simultaneously displaying an indicator representing a quantity of correction of an image distortion in the horizontal direction and an indicator representing a quantity of correction of an image distortion in the vertical direction, when an image distortion correction process is selected on the displayed menu option window in response to a user's instruction and starts, as recited in claim 6.

As discussed above, Blalock discloses an image distortion correction that takes place only in the vertical direction by varying only the value of the vertical correction parameter that corresponds to the image distortion in the vertical direction. Therefore, Blalock does not disclose or suggest simultaneous correction or simultaneously displaying an indicator representing a quantity of correction of an image distortion in the horizontal direction and the vertical direction.

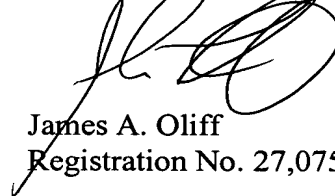
Furthermore, even if it were obvious to one of ordinary skill in the art to display an indicator represented in a quantity of adjustment of an image distortion in the vertical direction, it is not obvious to one of ordinary skill in the art to display, on the same image plane, indicators respectively representing a quantity of adjustment of an image distortion in the vertical direction and a quantity of adjustment of an image distortion in the horizontal direction. Accordingly, Applicants respectfully request the rejection of claims 3, 4 and 6 under 35 U.S.C. §103(a) be withdrawn.

IV. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-6 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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ABSTRACT

~~The present invention provides a~~ A projector ~~that is capable of correcting an image distortion due to off-axis projection of an image in a horizontal direction and in a vertical direction onto a screen.~~ ~~The projector includes:-~~ includes an image distortion adjustment module that adjusts a display video signal, ~~which represents an image to be projected by the projector,~~ according to values of a horizontal correction parameter used for correcting an image distortion in the horizontal direction and a vertical correction parameter used for correcting an image distortion in the vertical direction, so as to correct an image distortion arising in at least one of the horizontal direction and the vertical direction; a two-dimensional input unit that outputs a two-dimensional operation signal, which is mapped to the horizontal correction parameter and to the vertical correction parameter, ~~in response to a user's operation;~~ and a parameter setting module that sets the values of the horizontal ~~correction parameter~~ and the vertical correction ~~parameter~~ parameters in the image distortion adjustment module in response to the two-dimensional operation signal. ~~This arrangement effectively enhances operatability in the process of correcting the image distortion due to off-axis projection.~~